

In the Claims

1-30 (cancelled).

31 (currently amended). ~~A~~ An isolated molecule which comprises an amino acid sequence that binds to the hepreceptor, wherein said hepreceptor binding sequence consists of at least 5 consecutive amino acids of SEQ ID NO. 29 ~~is a peptide comprising an amino acid sequence of at least 5 amino acids identical to a portion of amino acids 333-373 of the Hepreceptor.~~

32 (currently amended). The molecule, according to claim 31, ~~which comprises a sequence wherein the hepreceptor binding sequence consists of at least 5 consecutive amino acids identical to a portion of amino acids 333-355 of the Hepreceptor located at positions 1-13 in SEQ ID NO.:29.~~

33 (currently amended). The molecule, according to claim ~~32~~ 31, wherein said ~~identical portion is~~ hepreceptor binding sequence consists of from 5 to 14 ~~between 5 and 13~~ amino acids.

34 (currently amended). An isolated molecule which comprises an amino acid sequence that binds to the hepreceptor, wherein said hepreceptor binding sequence consist of an amino acid sequence ~~The molecule, according to claim 32, which comprises an amino acid sequence~~ selected from the group consisting of:

MREKEELMLRLQDY<sub>(p)</sub>X<sub>aa</sub>EEKTKKAERELSEQIQRALQ (SEQ ID NO. 2);

EREKE (SEQ ID NO. 16);

EREKEQMMREKEEL (SEQ ID NO. 17);

KEELM (SEQ ID NO. 18);

KEELMLRLQDYEE (SEQ ID NO. 19);

KEELMLRLQDY<sub>p</sub>EE (SEQ ID NO. 20);

EELMLRLQDYEE (SEQ ID NO. 21);

4

Docket No. GJE-67  
Serial No. 09/856,070

EELMLRLQDYpEE (SEQ ID NO. 22);  
ELMLRLQDYEE (SEQ ID NO. 23);  
ELMLRLQDYpEE (SEQ ID NO. 24);  
MLRLQ (SEQ ID NO. 25);  
QDYEE (SEQ ID NO. 26); and  
QDYpEE (SEQ ID NO. 27).

35 (previously cancelled).

36 (currently amended). The molecule, according to claim 34, which ~~comprises~~ consists of:  
MREKEELMLRLQDY<sub>(p)</sub>XaaEEKTKKAERELSEQIQRALQ (SEQ ID NO. 2).

37-49 (cancelled).

50 (currently amended). The molecule, according to claim 34, which ~~comprises~~ consists of:  
EREKE (SEQ ID NO. 16).

51 (currently amended). The molecule, according to claim 34, which ~~comprises~~ consists of:  
EREKEQMMREKEEL (SEQ ID NO. 17).

52 (currently amended). The molecule, according to claim 34, which ~~comprises~~ consists of:  
KEELM (SEQ ID NO. 18).

53 (currently amended). The molecule, according to claim 34, which ~~comprises~~ consists of:  
KEELMLRLQDYEE (SEQ ID NO. 19).

54 (currently amended). The molecule, according to claim 34, which ~~comprises~~ consists of:  
KEELMLRLQDYpEE (SEQ ID NO. 20).

S:\SH-RESP\GJE\GJE-67-amend.doc\DNB\la

5

Docket No. GJE-67  
Serial No. 09/856,070

55 (currently amended). The molecule, according to claim 34, which ~~comprises~~ consists of:  
EELMLRLQDYEE (SEQ ID NO. 21).

56 (currently amended). The molecule, according to claim 34, which ~~comprises~~ consists of:  
EELMLRLQDYpEE (SEQ ID NO. 22).

57 (currently amended). The molecule, according to claim 34, which ~~comprises~~ consists of:  
ELMLRLQDYEE (SEQ ID NO. 23).

58 (currently amended). The molecule, according to claim 34, which ~~comprises~~ consists of:  
ELMLRLQDYpEE (SEQ ID NO. 24).

59 (currently amended). The molecule, according to claim 34, which ~~comprises~~ consists of:  
MLRLQ (SEQ ID NO. 25).

60 (currently amended). The molecule, according to claim 34, which ~~comprises~~ consists of:  
QDYEE (SEQ ID NO. 26).

61 (currently amended). The molecule, according to claim 34, which ~~comprises~~ consists of:  
QDYpEE (SEQ ID NO. 27).

62 (currently amended). A method for upregulating the immune system in a patient with cancer, HIV, or a bacterial infection, wherein said method comprises administering, to a patient in need of such upregulation with cancer, HIV, or a bacterial infection, an effective amount of a molecule which comprises an amino acid sequence that binds to the hepreceptor, wherein said hepreceptor binding sequence consists of at least 5 consecutive amino acids of SEQ ID NO. 29; wherein the administration of said molecule results in upregulation of the immune system in the patient~~which binds to the Hepreceptor~~.

S:\SH-RESP\GJE\GJE-67-amend.doc\DNB\la

6

Docket No. GJE-67  
Serial No. 09/856,070

63 (cancel).

64 (cancel).

65 (currently amended). The method, according to claim 64, wherein said hepreceptor binding sequence molecule comprises between has between 5 and ~~13~~ 14 amino acids ~~which are identical to the Hpreceptor~~

66 (currently amended). The method, according to claim 64, wherein said molecule comprises an amino acid sequence selected from the group consisting of:

~~AREEKHOKQLERQOLETEKKRRETVEREKEQM (SEQ ID NO. 1);~~

MREKEELMLRLQDY<sup>(\*)</sup> XaaEEKTKKAERELSEQIRALQ (SEQ ID NO. 2);

TEKKR (SEQ ID NO. 3);

TEKKRRETV (SEQ ID NO. 4);

TEKKRRETVER (SEQ ID NO. 5);

KKRRE (SEQ ID NO. 6);

KKRRETVE (SEQ ID NO. 7);

KKRRETVERE (SEQ ID NO. 8);

KKRRETVEREK (SEQ ID NO. 9);

KKRRETVEREKE (SEQ ID NO. 10);

KRRETVER (SEQ ID NO. 11);

KRRETVEREK (SEQ ID NO. 12);

~~KRRETVEREKE (SEQ ID NO. 13);~~

RRETV (SEQ ID NO. 14);

~~RETVEREKE (SEQ ID NO. 15);~~

EREKE (SEQ ID NO. 16);

EREKEQMMREKEEL (SEQ ID NO. 17);

KEELM (SEQ ID NO. 18);

KEELMLRLQDYEE (SEQ ID NO. 19);

S:\SH-RESP\GJE\GJE-67-amend.doc\DNB\la

7

Docket No. GJE-67  
Serial No. 09/856,070

KEELMLRLQDYpEE (SEQ ID NO. 20);  
EELMLRLQDYEE (SEQ ID NO. 21);  
EELMLRLQDYpEE (SEQ ID NO. 22);  
ELMLRLQDYEE (SEQ ID NO. 23);  
ELMLRLQDYpEE (SEQ ID NO. 24);  
MLRLQ (SEQ ID NO. 25);  
QDYEE (SEQ ID NO. 26); and  
QDYpEE (SEQ ID NO. 27).

67-76 (withdrawn).

S:\SH-RESP\GJE\GJE-67-amend.doc\DNB\la